SOUTH DAKOTA
DEPARTMENT
OF HEALTH

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Oral health in South Dakota 2000-2003

by Mynna Boodhoo Kightlinger, MSPH, South Dakota Cancer Registry Coordinator

"The word *oral* refers to the mouth. The mouth includes not only the teeth and the gums (gingiva) and their supporting tissues, but also the hard and soft palate, the mucosal lining of the mouth and throat, the tongue, the lips, the salivary glands, the chewing muscles, and the upper and lower jaws. Equally important are the branches of the nervous, immune, and vascular systems that animate, protect, and nourish the oral tissues, as well as provide connections to the brain and the rest of the body. The genetic patterning of development in utero further reveals the intimate relationship of the oral tissues to the developing brain and to the tissues of the face and head that surround the mouth, structures whose location is captured in the word *craniofacial*.

Oral health means much more than healthy teeth. It means being free of chronic oral-facial pain conditions, oral and pharyngeal (throat) cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and scores of other diseases and disorders that affect the oral, dental, and craniofacial tissues, collectively known as the *craniofacial complex*. These are tissues whose functions we often take for granted, yet they represent the very essence of our humanity. They allow us to speak and smile; sigh and kiss; smell, taste, touch, chew, and swallow; cry out in pain; and convey a world of feelings and emotions through facial expressions. They also provide protection against microbial infections and environmental insults.

The craniofacial tissues also provide a useful means to understanding organs and systems in less accessible parts of the body. The salivary glands are a model of other exocrine glands, and an analysis of saliva can provide telltale clues of overall health or disease. The jawbones and their joints function like other musculoskeletal parts. The nervous system apparatus underlying facial pain has its counterpart in nerves elsewhere in the body. A thorough oral examination can detect signs of nutritional deficiencies as well as a number of systemic

diseases, including microbial infections, immune disorders, injuries, and some cancers. Indeed, the phrase ***the mouth is a mirror*** has been used to illustrate the wealth of information that can be derived from examining oral tissues.

New research is pointing to associations between chronic oral infections and heart and lung diseases, stroke, and low-birth-weight, premature births. Associations between periodontal disease and diabetes have long been noted.

The broadened meaning of *oral health* parallels the broadened meaning of *health*. In 1948 the World Health Organization expanded the definition of health to mean "a complete state of physical, mental, and social well-being, and not just the absence of infirmity." It follows that oral health must also include well-being. Oral health and general health are inseparable. You cannot be healthy without oral health. Oral health and general health should not be interpreted as separate entities. Oral health is a critical component of health and must be included in the provision of health care and the design of community programs."[1]

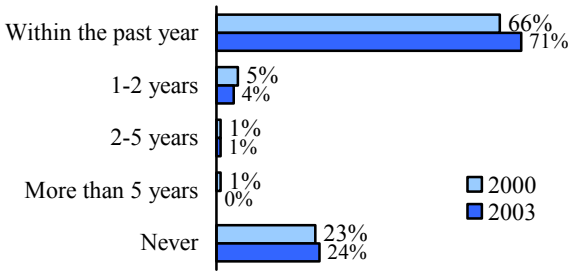
Recognizing the importance of oral health, the South Dakota Department of Health established an oral health program in the office of Health Promotion in May 2002 to address oral health among families with small children.

The department tracks oral health in South Dakota by looking at the numbers of children and adults who visit the dentist, how many get their teeth cleaned and how many lose permanent teeth. The Behavioral Risk Factor Surveillance System (BRFSS) data covering oral health among children 0 to 17 years old from 2001 to 2003[2] and oral health among adults from 2000 to 2002[3] are presented in this article.

Oral health among children (0-17 years)

From 2000 to 2003 the number of children who went to the dentist during the year preceding the survey increased 5%.

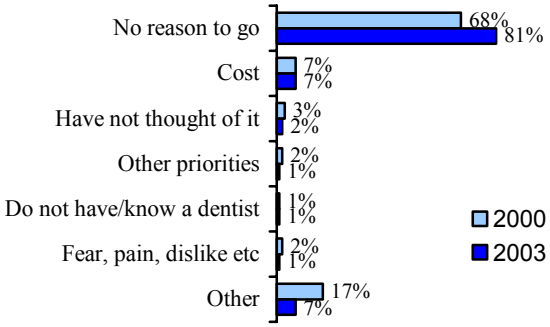
Figure 1: Length of time since child visited dentist or dental clinic, South Dakota 2000, 2003



Source: South Dakota Department of Health Behavioral Risk Factor Surveillance Surveys 2000, 2003

However, 7% of participants cited cost as a reason for not seeing a dentist. Thirteen percent more children reported no reason to go to the dentist in 2003 than in 2000.

Figure 2: Reason why children have not visited the dentist within the last year, South Dakota 2000, 2003



Source: South Dakota Department of Health Behavioral Risk Factor Surveillance Surveys, 2000, 2003

In both years, 1% of children in the "other" category were unable to go to the dentist because of lack of transportation, distance or inability to get an appointment.

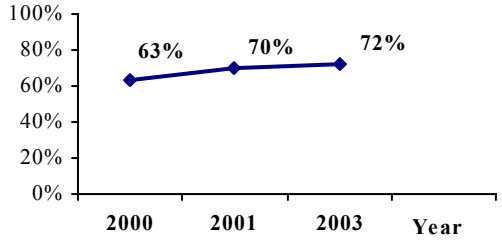
[1] Excerpt from the summary of Oral Health in America: A Report of the Surgeon General. May 25, 2001.

[2] Health Behaviors of South Dakotans Annual Reports 2000, 2001, 2002, unpublished 2003, South Dakota Department of Health

[3] http://www.cdc.gov/brfss/.

Dental coverage increased from 63% to 72% between 2000 and 2003. This coverage included pre-paid plans such as an HMO or a government plan such as Medicare.

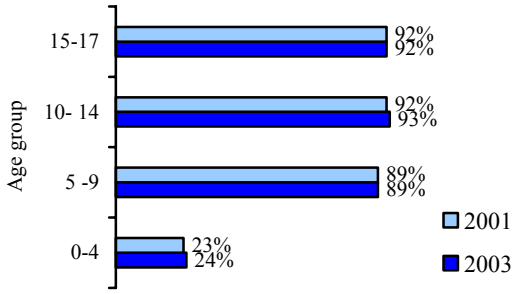
Figure 3: Dental insurance coverage among children 0-17 years, South Dakota 2000-2003



Source: South Dakota Department of Health Behavioral Risk Factor Surveillance Surveys, 2000- 2003

Survey data showed that 89% of 5-9 year olds and 92% of 10-14 year olds had visited the dentist during the year preceding the survey.

Figure 4: Children who visited the dentist in the year preceding the survey by age groups, South Dakota 2001, 2003



Source: South Dakota Department of Health Behavioral Risk Factor Surveillance Surveys, 2001- 2003

Approximately 76% of children younger than 5 years old and 5% of 5-9 year olds never go to the dentist, compared to less than 1% of teens. The American Academy of Pediatric Dentistry recommends an oral examination for all infants within 6 months of the eruption of the first tooth and not later than 12 months of age.

Table 1: Reason for visit to the dentist, 14-17 year olds, South Dakota 2003.

	Ages 14-17
Went in on own for check-up, examination or cleaning	73%
Was called in by the dentist for check-up, examination or cleaning	10%
Something was wrong, bothering or hurting	6%
Went for treatment on a condition diagnosed at earlier visit	5%
Other	6%

Source: South Dakota Behavioral Risk Factor Surveillance System 2003

Oral health among adults (18 and older)

Seventy-one percent of South Dakota adults reported visiting the dentist within the 12 months preceding the 2002 survey, a 5% increase from the 66% reported in 2000. The national rate in 2002 was 69%. According to the 2002 BRFSS:

- Those who did not go to the dentist were more likely to be poor and less educated.
- 86% of those earning $75,000 or more went to the dentist compared to 60% of those earning less than $15,000.
- 80% of college graduates went to the dentist, compared to 55% of those with less than a high school education.
- 67% of males and 75% of women went to the dentist.
- 59% of American Indians went to the dentist, compared to 73% of whites.
- 63% of adults 65 and older went to the dentist, compared to more than 70% for all other age groups; the 45-54 year olds had the highest rate at 76%.
- 70% had their teeth cleaned by a dentist or dental hygienist.
- 19% of adults were missing 6 or more teeth due to decay or gum disease compared to 18% nationwide.
- Tooth loss increased with age; 51% of those over 65 were missing 6 teeth, compared to 34% of 55-65 year olds.
- 35% of those earning less than $15,000 had lost 6 or more teeth compared to 7% of those earning $50,000 plus.

- 43% of those with less than a high school education had lost 6 or more teeth compared to 8% with a college education.

Prevention

Maintaining oral health is a lifelong effort. In addition to good brushing and flossing habits, good nutrition and regular visits to the dentist, fluoridation is the single most effective public health measure for preventing tooth decay and improving oral health. Community water fluoridation, cited as one of 10 great public health achievements of the 20th century by the Centers for Disease Control and Prevention (CDC), is 60 years old this year.

Community water fluoridation benefits everyone, especially those without access to regular dental care. It is the most efficient way to prevent one of the most common childhood diseases; tooth decay is 5 times as common as asthma and 7 times as common as hay fever in 5-to-17-year-olds. Currently, 67% of Americans on public water systems receive optimally fluoridated water.[4] In 2003, 78% of South Dakota's population had access to fluoridated water.[5]

For more information about oral health programs in South Dakota, contact Julie Ellingson, Department of Health Oral Health Coordinator, at 605-773-7150 or visit the web at www.state.sd.us/doh/OralHealth/.

[4] CDC Water Fluoridation Reporting System, 2002. Available at http://www2.cdc.gov/nohss/FluoridationV.asp.
[5] Mitch Williams, South Dakota Department of Environment and Natural Resources. 2003

Tuberculosis skin test requirement repealed for school children & employees

The 2005 South Dakota Legislature repealed the TB skin test requirement for school students (SDCL 13-28-7.1) and school employees (SDCL 13-43-3), effective July 1, 2005. New students and new employees will not be required to receive TB skin tests for the 2005-2006 school year.

The South Dakota Department of Health recommended the skin test repeal because school students and school employees are at extremely low risk for TB, thus the screening requirement was not necessary.

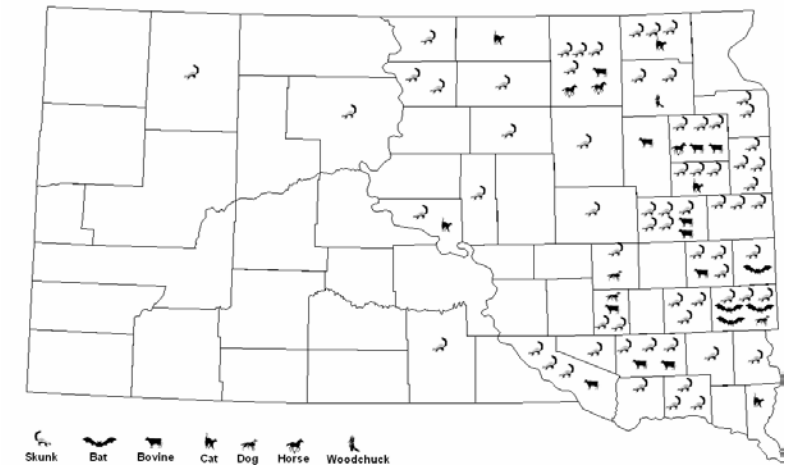
The department will revise the *Certificate of Immunization* form for students and the *School Employee Certification of Health* form to reflect the changes. The Department of Health will continue to target high-risk populations through other screening efforts and will work with school districts as needed to protect students and employees.

Contact Kristin Rounds, Tuberculosis Control Program Coordinator at (605) 773-3737 or at kristin.rounds@state.sd.us if you have questions about the change.

Rabies surveillance, South Dakota, 2004

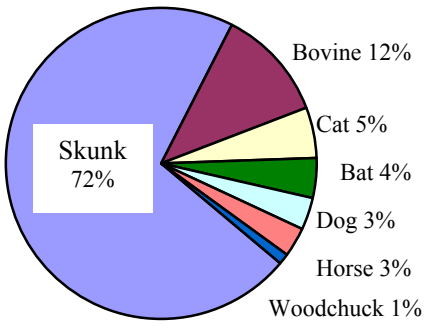
Rabies is enzootic in South Dakota. In 2004, 848 animals were submitted for rabies testing in South Dakota with 94 testing positive. This was a 29% decrease from 2003 when 132 animals tested positive. The 94 rabies positive animals included 72 wild animals (67 skunks, 4 bats, and 1 woodchuck) and 22 domestic animals (11 cattle, 5 cats, 3 dogs, and 3 horses). There were no human rabies cases in South Dakota in 2004. South Dakota's last human case was in 1970.

Animal Rabies in South Dakota by County, 2004



In 2004 rabid animals were detected in 36 South Dakota counties. Animals were submitted for testing from all counties except Bennett, Buffalo, Corson, Sully and Ziebach. From 1990 through 2004, there were 15,161 animals tested for rabies in South Dakota, 1,762 of which tested positive (12%). During these years animals were submitted for testing from all counties, and rabid animals were detected in all counties except Bennett, Shannon, Todd, and Ziebach. Minnehaha County

Animal rabies cases, South Dakota, 2004



Animal rabies cases by County, 1990 – 2004

County	2004 Pos	2004 Neg	1990 – 2004 Pos	1990 – 2004 Neg	% Pos
Aurora	0	2	27	92	23%
Beadle	1	10	55	239	19%
Bennett	0	0	0	24	0%
Bon Homme	1	0	12	91	12%
Brookings	3	43	72	672	10%
Brown	7	42	75	448	14%
Brule	0	4	22	135	14%
Buffalo	0	0	6	24	20%
Butte	0	17	38	272	12%
Campbell	1	0	21	64	25%
Charles Mix	4	10	36	186	16%
Clark	1	7	37	101	27%
Clay	0	7	6	130	4%
Codington	6	21	58	326	15%
Corson	0	0	7	23	23%
Custer	0	5	4	48	8%
Davison	4	26	45	442	9%
Day	3	7	51	152	25%
Deuel	4	17	53	262	17%
Dewey	1	2	25	78	24%
Douglas	1	2	24	100	19%
Edmunds	1	2	19	98	16%
Fall River	0	7	4	196	2%
Faulk	1	4	23	60	28%
Grant	2	6	33	215	13%
Gregory	0	6	13	116	10%
Haakon	0	2	9	83	10%
Hamlin	4	10	58	164	26%
Hand	0	4	30	102	23%
Hanson	0	6	14	65	18%
Harding	0	1	11	34	24%
Hughes	2	30	35	313	10%
Hutchinson	5	22	65	283	19%
Hyde	1	4	19	104	15%
Jackson	0	4	2	86	2%
Jerauld	0	4	18	65	22%
Jones	0	2	3	26	10%
Kingsbury	7	11	66	250	21%
Lake	4	22	39	246	14%
Lawrence	0	6	20	180	10%
Lincoln	1	14	13	245	5%
Lyman	0	6	2	61	3%
Marshall	4	6	31	142	18%
McCook	3	13	41	190	18%
McPherson	1	9	35	137	20%
Meade	0	11	29	265	10%
Mellette	0	1	1	18	5%
Miner	0	9	28	103	21%
Minnehaha	7	135	90	2432	4%
Moody	2	6	39	165	19%
Pennington	0	70	46	1108	4%
Perkins	1	1	11	44	20%
Potter	0	1	11	40	22%
Roberts	0	13	47	273	15%
Sanborn	2	3	24	85	22%
Shannon	0	5	0	57	0%
Spink	1	11	26	155	14%
Stanley	0	2	3	25	11%
Sully	0	0	7	18	28%
Todd	0	10	0	90	0%
Tripp	1	2	16	159	9%
Turner	1	21	43	318	12%
Union	1	5	7	141	5%
Walworth	2	15	40	328	11%
Yankton	3	10	17	201	8%
Ziebach	0	0	0	4	0%
South Dakota	**94**	**754**	**1762**	**13399**	**12%**

submitted the most animals for testing (2,522) and Ziebach the fewest (4).

Since 1990, 26% of rabid animal cases in South Dakota have been domestic animals. Rabid livestock included 214 cattle, 50 horses, 6 sheep, 3 pigs, and 2 goats. There were also 101 rabid dogs and 87 rabid cats, many of which were unvaccinated strays. Of the 72 rabid dogs investigated between 1993 and 2004, none were fully immunized, 85% (61) had never been immunized, 7% (5) were inadequately immunized, and 8% (6) were of unknown vaccination status.

The common skunk (*Mephitis mephitis*) is the enzootic rabies reservoir in South Dakota. Since 1990, 68% of the skunks tested have been rabid. Bat rabies is also enzootic in South Dakota with 71 positive bats since 1990, 3% of the bats tested.

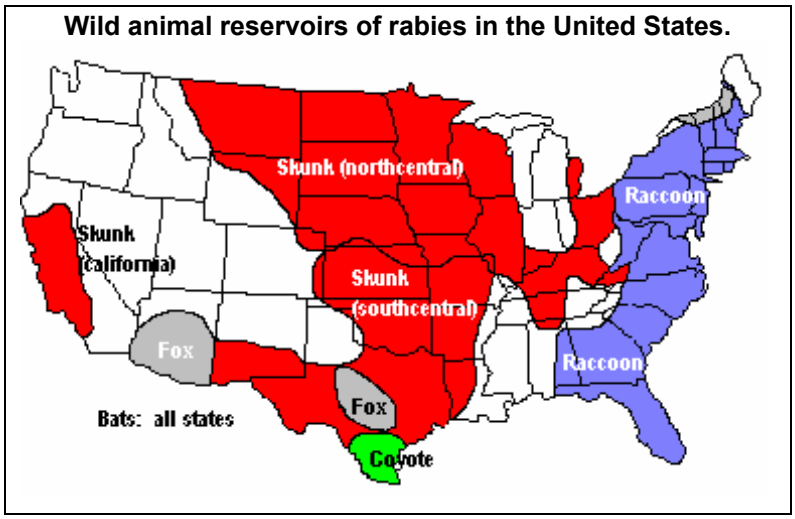
Rabies is not considered enzootic in other wild animals in South Dakota. Since 1990, however, rabies has been detected in 8 fox, 3 badgers, 3 raccoons, 2 bison, 1 opossum, 1 shrew and 1 woodchuck. These other wild animal cases are probably spillover rabies following exposure to rabid skunks.

Animals tested and confirmed rabies cases, SD, 1990-2004

Animal	2004 Total tested	2004 Pos	1990 - 2004 Total tested	1990 - 2004 Pos	1990 - 2004 % Pos
Skunk	**67**	**92**	1768	1209	68%
Cattle	**11**	**103**	2048	214	10%
Dog	**3**	**168**	2836	101	4%
Cat	**5**	**240**	4090	87	2%
Bat	**4**	**123**	2058	71	3%
Horse	**3**	**29**	339	50	15%
Fox	**0**	**4**	87	8	9%
Sheep	**0**	**7**	164	6	4%
Raccoon	**0**	**29**	811	3	0%
Pig	**0**	**1**	29	3	10%
Badger	**0**	**0**	20	3	15%
Goat	**0**	**4**	37	2	5%
Bison	**0**	**2**	11	2	18%
Opossum	**0**	**6**	65	1	2%
Woodchuck	**1**	**4**	16	1	6%
Shrew or mole	**0**	**0**	7	1	14%
Rodents*	**0**	**11**	445	0	0%
Deer, elk, donkey, llama	**0**	**2**	84	0	0%
Weasel, ferret, mink	**0**	**1**	69	0	0%
Coyote or wolf	**0**	**1**	53	0	0%
Squirrel, chipmunk	**0**	**12**	49	0	0%
Muskrat	**0**	**1**	38	0	0%
Rabbits and hares	**0**	**5**	15	0	0%
Bobcat or bear	**0**	**0**	5	0	0%
Mountain lion	**0**	**2**	2	0	0%
Other animals	**0**	**1**	15	0	0%
TOTAL	**94**	**848**	**15161**	**1762**	**12%**

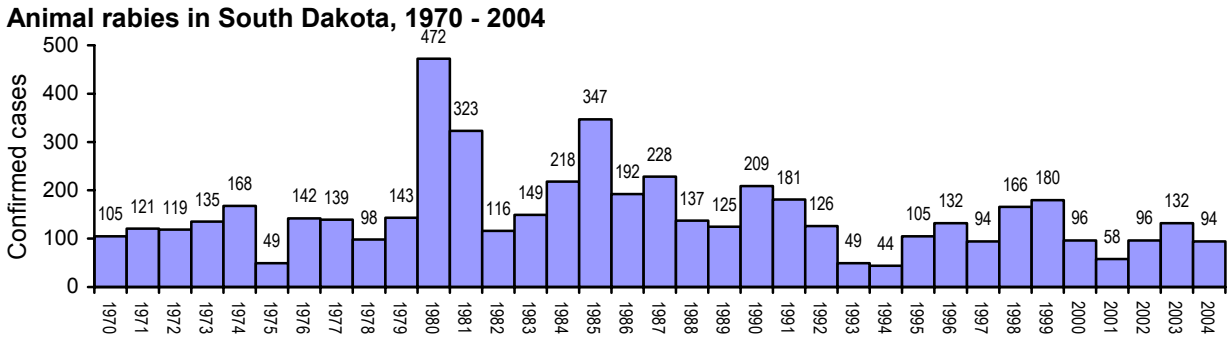
*Rodents: rat, mouse, prairie dog, gopher, beaver, porcupine, vole

Wild animal reservoirs of rabies in the United States.

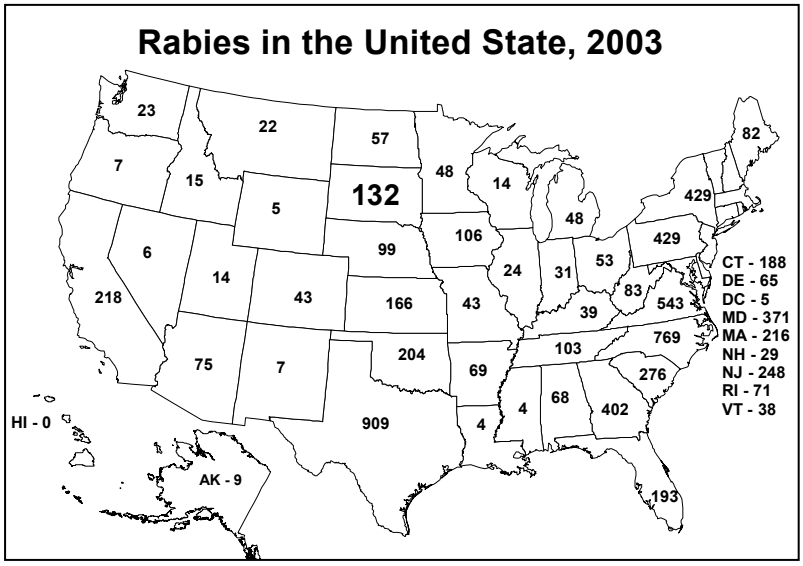


Animal rabies events occur throughout the year in South Dakota, but most rabies events occur during the spring and summer months.

Nationally there were 7 human rabies cases in 2004, 6 deaths and 1 survival. One of the human rabies (*bat virus*) victim's organs were transplanted into 4 other people who then developed rabies and died. The other human death was a Florida resident (*dog rabies*). A teenager from Wisconsin survived bat rabies after receiving experimental treatment.



The latest national animal rabies surveillance information is reported for 2003 data (Krebs, et. al., 2004). Nationally, there were 7,170 cases of animal rabies reported in 2003. According to Krebs 91% of the rabies cases are among wild animals and 9% are from domestic animals. Nationally domestic animals included 321 cats, 117 dogs, 98 cattle, 63 horses/mules, 11 goats, 1 sheep and 2 swine. In 2003 South Dakota had 14 rabid cattle, second most in the country. Nationally, wild animals testing positive for rabies included 2,635 raccoons, 2,112 skunks, 1,212 bats, 456 fox, 49 mongooses, 34 bobcats, 31 groundhogs, 7 coyotes, 4 deer, 3 otters, 3 opossums, 2 beavers, 2 rabbits, 1 badger, 1 bear, 1 guinea pig, 1 rat, 1 ringtail (*Bassariscus*) and 1 gray squirrel. Nationally rabies decreased 10% between 2002 and 2003. In 2003 South Dakota had 11 rabid dogs, third most in the country following Texas, 19, and Oklahoma, 16.



Two laboratories do rabies testing in South Dakota: (1) Animal Disease Research Diagnostic Laboratory in Brookings, and (2) State Public Health Laboratory in Pierre. Both laboratories use the direct fluorescent antibody (DFA) technique. The case definition of a confirmed animal rabies case is a positive DFA test, performed preferably on central nervous system tissue, or the isolation of rabies virus in cell culture or in a laboratory animal. Human serum rabies antibody titers on previous vaccinated people may be ordered through the Public Health Laboratory.

Rabies consultations are available from the Office of Disease Prevention, South Dakota Department of Health, 7 days a week. Consultations are based on current Centers for Disease Control and Prevention (CDC) recommendations*. We strive to recommend appropriate rabies prevention measures and to minimize unnecessary and inappropriate post-exposure testing and prophylactic treatment.

RABIES ADDRESSES, TELEPHONE NUMBERS and WEB SITES

Department of Health, Office of Disease Prevention
(rabies consultations)
615 East Fourth Street
Pierre, SD 57501-1700
Phone: 605-773-3737; 1-800-592-1861;
after hours cell phone 605-280-4810
Web: www.state.sd.us/doh/Pubs/rabies.htm

Department of Health, Public Health Laboratory
(rabies testing and submitting specimens)
615 East Fourth Street
Pierre, SD 57501-1700
Phone: 1-800-592-1861 or 605-773-3368
Web: www.state.sd.us/doh/Lab/rabies.htm

Animal Disease Research and Diagnostic Laboratory (rabies testing)
Box 2175, North Campus Drive
South Dakota State University
Brookings, SD 57007-1396
Phone: 605-688-5171
Web: http://vetsci.sdstate.edu/

South Dakota Animal Industry Board (livestock and other animal veterinary and regulatory issues)
441 S. Fort Street, Pierre, SD 57501-4503
Phone: 605-773-3321 Web: www.state.sd.us/aib

South Dakota Bat Working Group
http://nat_hist.sdstate.edu/SDBWG/SDBWG.html

CDC Rabies homepage:
www.cdc.gov/ncidod/dvrd/rabies/default.htm

Rabies is a viral infection that affects the nervous system of mammals. Rabies is usually transmitted by a bite from an infected animal, scratch or exposure to saliva. After being bitten or scratched, symptoms usually start 3 - 8 weeks later. Symptoms may include behavior changes, headache, fever, malaise, sensory changes, and paralysis. Rabies is almost always fatal. Prompt vaccination following a bite prevents rabies in humans. Up-to-date vaccinations of dogs, cats, ferrets and livestock, prior to exposure, protects against the disease. If a human is exposed to rabies they must have anti-rabies shots. See your physician.

ANTI-RABIES SHOTS (POST-EXPOSURE PROPHYLAXIS)

- Clean wound with soap, water and a virucidal agent such as povidone-iodine solution.
- Immunize for tetanus, if needed.
- Control the bacterial infection.
- Administer rabies immune globulin (RIG) 20 IU/kg body weight, infiltrated around wound site.
- Administer 5 doses of rabies vaccine, 1.0 mL each (IM deltoid) over 28-days (days 0, 3, 7, 14, 28).
- If the person was previously vaccinated for rabies, the RIG should not be administered and only 2 doses of vaccine are recommended (days 0 and 3).
- Anti-rabies post-exposure prophylaxis costs around $2000, depending on weight of the patient.
- Rabies shots are given in the arm, like the flu shot.

References

*Centers for Disease Control and Prevention. Human rabies prevention – United States, 1999: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999; 48 (No. RR-1). www.cdc.gov/mmwr/preview/mmwrhtml/00056176.htm

Centers for Disease Control and Prevention. Compendium of animal rabies prevention and control, 2004: National Association of State Public Health Veterinarians, Inc. MMWR 2004; 53 (No. RR-9). www.cdc.gov/mmwr/preview/mmwrhtml/rr5309a1.htm

Krebs, JW, EJ Mandel, DL Swerdlow and CE Rupprecht. 2004. Rabies surveillance in the United States during 2003. Journal of the American Veterinary Medical Association 225: 1837-1849.

South Dakota Laws Regarding Rabies Control.

RABIES CONTROL STATUE: Chapter 40-12 (Section 12-1, 2, 3, 4, 5, 6)

40-12-1. Confinement of animals required in localities where rabies exists -- Neglect as misdemeanor. In localities where rabies exists, the animal industry board may require that any animal deemed likely to spread such disease shall be muzzled, caged, tied or confined in any manner that may be deemed necessary. It is a Class 1 misdemeanor for any owner or person in charge of any animal so ordered to be muzzled, caged, tied or confined, to refuse or neglect to carry out such order.

40-12-2. Destruction of rabid animal required. If the animal industry board determines that rabies exists in any animal, the board may kill such animal and any animal there is reason to believe has been bitten by any animal affected with rabies.

40-12-3. Violation of chapter as misdemeanor. Repealed by SL 1977, ch 190, § 482.

40-12-4. Definition of terms. Terms used in this chapter mean:
(1) "Department," the department of health;
(2) "Owner," any person who has a right of property in a pet, keeps or harbors a pet or who has it in his care or acts as its custodian, or permits a pet to remain on or about any premises occupied by him;
(3) "Pet," any dog, cat or other species of carnivore kept for domestication or display.

40-12-5. Confinement of pet after attack upon person -- Violation as misdemeanor. The department may serve written notice upon the owner of any dog or cat which has attacked or bitten a person to confine the animal at the owner's expense upon his premises or at a city pound or other place designated in the notice for a period of at least ten days after the animal has attacked or bitten any person. The department may examine the animal at any time within the ten-day period of confinement to determine whether such animal shows symptoms of rabies. In the case of any pet other than a dog or cat, which has attacked or bitten a person, the department may serve written notice upon the owner of such animal that the owner shall have the animal euthanized immediately and submit the brain to an approved laboratory for rabies examination. Any owner who fails to comply with a written notice served pursuant to this section is guilty of a Class 1 misdemeanor.

40-12-6. Confinement of pet bitten by animal suspected of having rabies -- Violation as misdemeanor. The department may serve written notice upon the owner of a dog or cat known to have been bitten by an animal known or suspected of being affected by rabies, requiring the owner to confine such dog or cat for a period of not less than six months. However, if such dog or cat had been properly treated with an antirabic vaccine, confinement shall be for a period of not less than three months. In the case of any pet other than a dog or cat, the department may serve written notice upon the owner of such animal that the owner shall have the animal euthanized immediately. Any owner who fails to comply with a written notice served pursuant to this section is guilty of a Class 1 misdemeanor.

SHERIFF: Chapter 7-12 (Section 7-12-29)

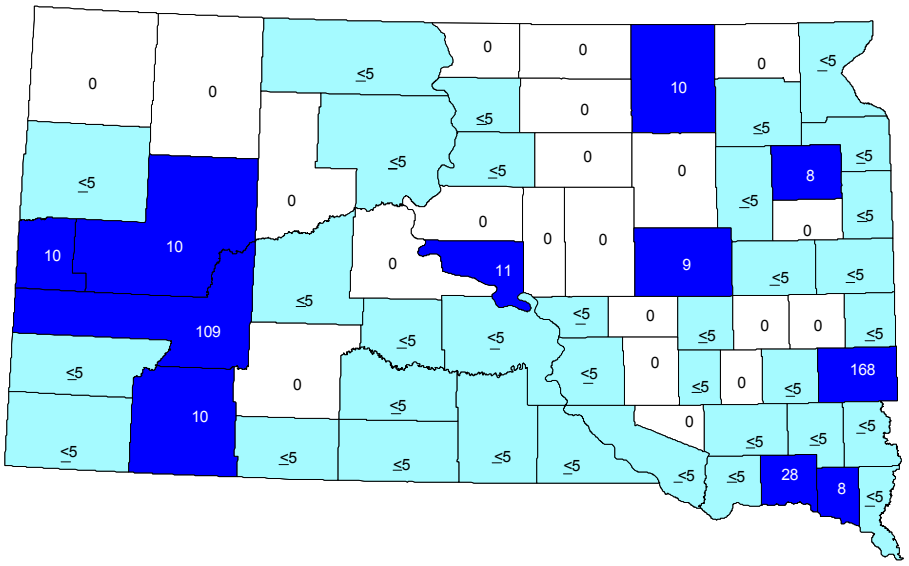
7-12-29. Taking and holding animal suspected of being dangerous -- Formal determination -- Disposal of dangerous animal. The sheriff may take possession of any animal suspected of being dangerous. The sheriff may hold such animal until a formal determination can be made of the extent of the danger such animal poses. If the animal has attacked or bitten a human or an animal pet, the formal determination shall include consultation with the Department of Health for the purposes of rabies control. The sheriff may dispose of any animal so determined to be dangerous.

CONTROL MEASURES: Administrative Rule, Article 44:20:03:10

44:20:03:10. Application of public health measures to animals. The department may instruct a person who owns or is in possession of an animal known or suspected to be a carrier of an infectious agent in public health measures for preventing infection and spread of disease. If the department knows or has reason to believe, because of testing or epidemiological information, that an animal is infected with an infectious agent and is a threat to the public health, it may issue a public health notice directing the person who owns or is in possession of the animal to take one or more of the following actions:
(1) To examine or test the animal to determine whether it is infected with an infectious agent capable of causing human disease
(2) To report to an authorized department representative for counseling on methods for preventing transmission of the infectious agent;
(3) To confine or quarantine the animal for the duration of the incubation period or contagious period;
(4) To destroy the animal or provide treatment until it is cured or free from the infection and to follow measures for preventing reinfection;
(5) To cease from specific activities involving the infected animal that endanger the health of others;
(6) To cooperate with the department in implementation of reasonable public health measures.

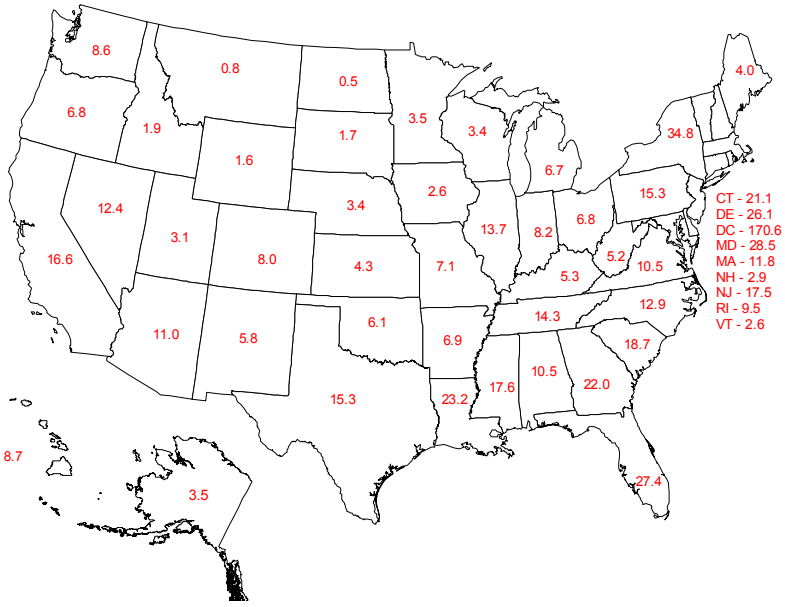
Four hundred and sixty two cumulative cases of HIV/AIDS were reported to the South Dakota Department of Health from 1985 through December 2004. Nineteen new HIV/AIDS cases were reported from January 1, 2004 through December 31, 2004. Thirteen of these cases were male and 6 cases were female.

South Dakota Residents Reported Infected with HIV/AIDS: Cumulative Cases by County, 1985- 2004



There are an estimated 261 people living with HIV/AIDS in South Dakota, 74% male and 26% female. Blacks and Native Americans are disproportionately affected by HIV/AIDS with Blacks comprising 15% of the cases and Native Americans 14%, compared to their comprising <1% and 8% of the population, respectively.

United States AIDS Incidence, 2003: Cases per 100,000



Source: Department of Health and Human Services HIV/AIDS Surveillance Report

South Dakota has among the lowest incidence of AIDS cases in the United States. In 2003 the South Dakota incidence rate was 1.7 cases per 100,000. The rate for the United States was 15.2 cases per 100,000.

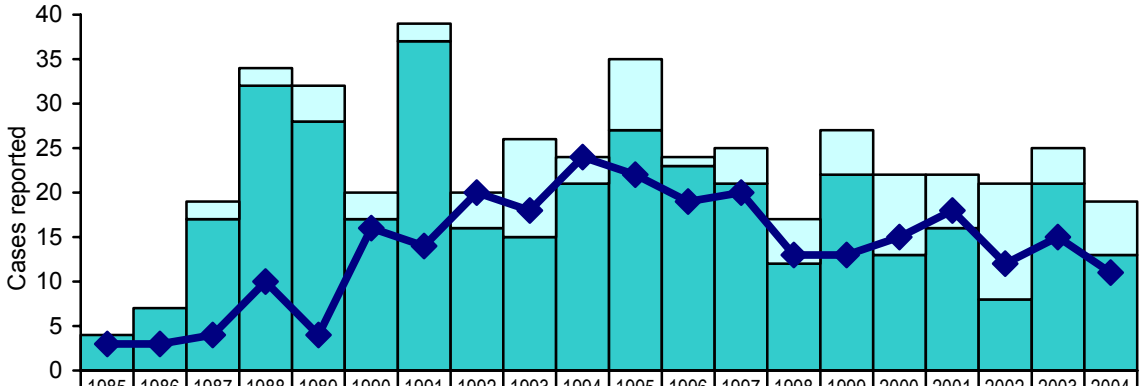
South Dakota HIV/AIDS Cumulative Statistics, 1985 – 2004

Residents reported infected with HIV since 1985	462
Residents currently living with HIV/AIDS	261
Male residents currently living with HIV/AIDS	194
Female residents currently living with HIV/AIDS	67
Residents reported who have been diagnosed with AIDS	274
Residents infected with HIV who have died (of all causes)	140
Residents who have been diagnosed with AIDS and have died	128
South Dakota AIDS Fatality Rate	47%
Out-of-state AIDS cases who have died in South Dakota	55

United States Cumulative AIDS Statistics through December 2003

AIDS Cases Reported in the United States	902,223
AIDS Deaths Reported in the United States	524,060
AIDS Fatality Rate in the United States	58%

South Dakota Residents Reported by Gender with HIV and AIDS, 1985- 2004



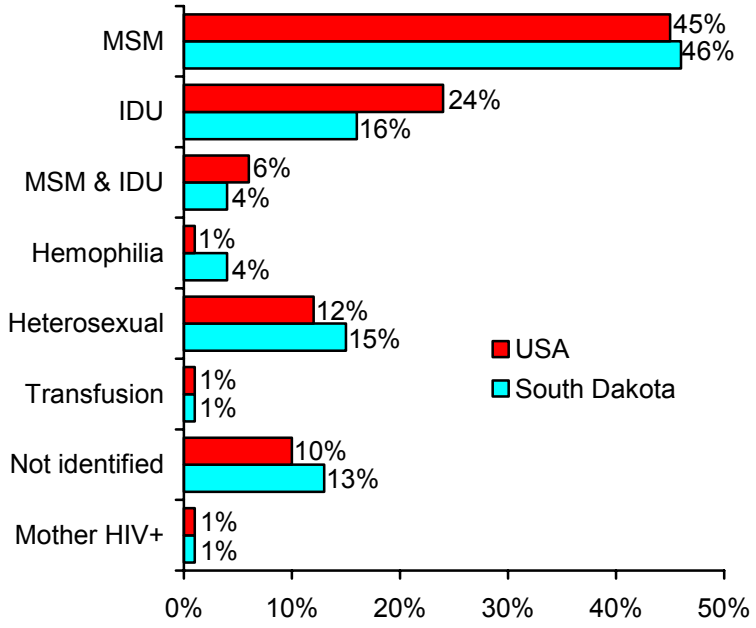
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
HIV (female)	0	0	2	2	4	3	2	4	11	3	8	1	4	5	5	9	6	13	4	6
HIV (male)	4	7	17	32	28	17	37	16	15	21	27	23	21	12	22	13	16	8	21	13
AIDS diagnosed	3	3	4	10	4	16	14	20	18	24	22	19	20	13	13	15	18	12	15	11

At the end of 2004, 462 SD residents had been reported as infected with HIV (370 male, 92 female) and 274 of those had also been diagnosed with AIDS. Some cases may have been reported as an HIV case in a different year than they were diagnosed with AIDS.

HIV/AIDS cases reported by race/ethnicity, sex, and age, SD, 1985-2004

Age at diagnosis	White		Native American		Black		Hispanic & other		All groups		Total
	Male	Female	Male	Female	Male	Female	Male	Female	M	F	
Under 5 yrs	2	1	1	2	0	0	1	0	**4**	**3**	**7**
5-12 yrs	3	0	1	0	0	0	0	0	**4**	**0**	**4**
13-19 yrs	10	2	0	2	2	0	1	1	**13**	**5**	**18**
20-29 yrs	77	21	14	7	10	6	7	1	**108**	**35**	**143**
30-39 yrs	118	14	19	9	15	6	3	0	**155**	**29**	**184**
40-49 yrs	45	9	8	2	3	1	1	0	**57**	**12**	**69**
50-59 yrs	14	4	4	0	1	2	1	2	**20**	**8**	**28**
≥60 yrs	8	0	1	0	0	0	0	0	**9**	**0**	**9**
Sub- Total	**277**	**51**	**48**	**22**	**31**	**15**	**14**	**4**	**370**	**92**	**462**
Total	**328**		**70**		**46**		**18**		**462**		

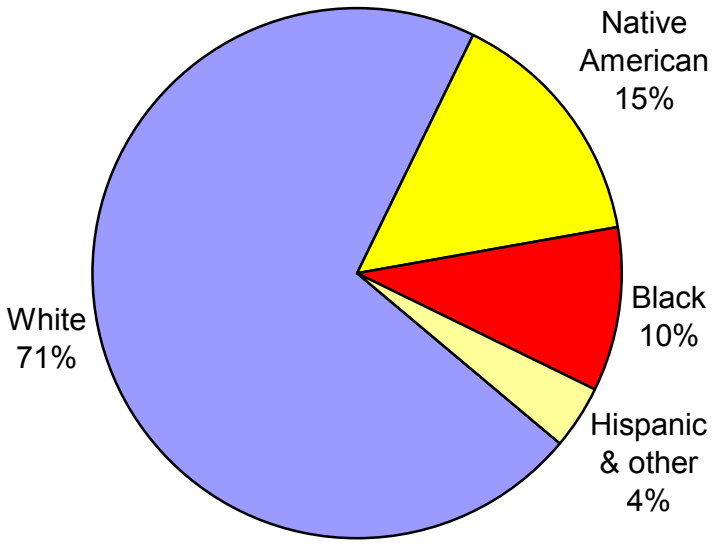
HIV AIDS Cases by Exposure Category*, SD** & USA***



*MSM (men who have sex with men)
*IDU (injection drug user)
**South Dakota HIV/AIDS cases 1985-2004
***US AIDS cases through 2003

Sometimes 2 or more exposures are reported for one case.
This table is consistent with the CDC hierarchy of exposures.

SD HIV/AIDS Cases by Race/Ethnicity, 1985- 2004, (n = 462)



South Dakotans living with HIV/AIDS (n=261)

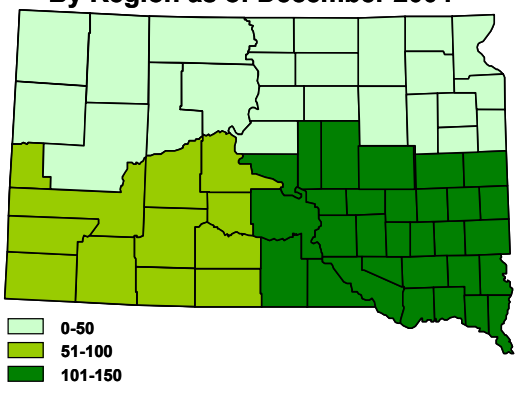
GENDER	Cases	Percent
Male	194	74%
Female	67	26%
Total	261	100%

RACE	Cases	Percent
White	174	67%
Native American	37	14%
Black	39	15%
Hispanic & Other	11	4%
Total	261	100%

AGE	Cases	Percent
0-12 years	1	1%
13-19 years	3	1%
20-29 years	32	12%
30-39 years	73	28%
40-49 years	104	40%
50+ years	48	18%
Total	261	100%

RISK	Cases	Percent
MSM	102	39%
Injection drug use	44	18%
MSM and IDU	9	3%
Heterosexual	55	21%
Transfusion	2	1%
Hemophilia	10	3%
Mother HIV+	2	1%
No risk identified	37	14%
Total	261	100%

South Dakotans living with HIV/AIDS: By Region as of December 2004



South Dakota Residents Reported with Associated Diseases, 1994- 2004												
Diseases	Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
HIV/AIDS		24	35	24	25	17	27	22	22	21	25	19
Chlamydia trachomatis infections		1432	1317	1538	1439	1573	1554	1835	1821	2214	2606	2537
Gonorrhea		245	244	176	172	221	192	277	289	263	226	305
Herpes, genital and neonatal		110	102	102	94	142	275	339	345	310	299	322
Syphilis, Primary and Secondary		2	0	0	1	1	0	0	1	0	2	0
Chancroid		0	0	0	0	0	0	0	0	0	0	0
Hepatitis B		4	2	5	1	4	1	2	0	3	3	0

Department of Health Confidential HIV Testing Centers

For testing and counseling for HIV/AIDS and other sexually transmitted diseases, contact one of the following sites or call **1-800-592-1861.**

Aberdeen
402 S. Main St.
Aberdeen, SD 57401-4127
605-626-2373
1-866-805-1007 toll-free

Rapid City
909 E. St. Patrick, Suite 7
Rapid City, SD 57701
605-394-2289
1-866-474-8221 toll free

Watertown
913 5th St. SE
Watertown, SD 57201-5134
605-882-5096
1-866-817-4090 toll free

Sioux Falls
1200 N. West Ave.
Sioux Falls, SD 57104
605-367-5365
1-866-315-9214 toll free

Pierre
302 E Dakota
Pierre, SD 57501-3133
605-773-5348
1-866-229-4927 toll free

Dupree
Ziebach County Court House
Dupree, SD 57623-0068
605-365-5164

National AIDS Hotline
1-800-342-2437

Sexually transmitted diseases (STDs) and bloodborne diseases are a reliable indicator of high-risk behavior (i.e., unprotected sexual intercourse) within populations and may increase the infectiousness of HIV.

AIDS has been a reportable disease in the U.S. and South Dakota since 1985. HIV infection without an AIDS diagnosis has been reportable in South Dakota since 1988. The tables and graphs provide information concerning South Dakota residents reported with HIV infection (non-AIDS) and AIDS.

The SD HIV/AIDS Surveillance Report is published annually. Data contained in this report are provisional. Percentages may not equal 100% due to rounding.
Questions regarding the surveillance report may be directed to Christine Olson (1-800-592-1861 or 605-773-3737). This report is available on the SD Department of Health website at *www.state.sd.us/doh/disease/stats.htm* or write to HIV Surveillance, 615 East 4th Street, Pierre, SD 57501. For HIV/AIDS information 24 hours a day call 1-800-342-2437 or see *http://www.cdc.gov/hiv/dhap.htm*.

South Dakota Department of Health HIV/AIDS website: *www.state.sd.us/doh/Pubs/HIVhow.htm*

Centers for Disease Control and Prevention HIV/AIDS website: *www.cdc.gov/hiv/dhap.htm*

SOUTH DAKOTA PUBLIC HEALTH LABORATORY

South Dakota Department of Health
Pierre, South Dakota

The South Dakota Public Health Laboratory is a multi-disciplinary facility containing laboratories for medical microbiology, environmental microbiology, environmental chemistry and forensic chemistry, with a 27-member staff including microbiologists, medical technologists, chemists and support staff.

- CLIA approved
- EPA certified for inorganic & organic chemical contaminants, radiochemistry & environmental microbiology
- Three Bio-safety level 3 (BSL3) suites
- Courier system to expedite specimen delivery

MEDICAL TESTS PERFORMED at the SOUTH DAKOTA PUBLIC HEALTH LABORATORY

- Adenovirus: culture, direct Ag, FA
- Anthrax: culture, PCR
- Bacillus: culture, PCR
- Bacterial reference identification
- Bordetella pertussis: culture & PCR
- Botulism: refer for toxin study
- Brucella: culture, PCR,antibody
- Campylobacter: culture
- Chlamydia: DNA detection
- Cytomegalovirus: culture, IgM, IgG
- Diptheriae: culture
- E. coli, Enterohemorrhagic: culture, Shiga-toxin detection, serotype
- Enteric Bacteria Reference Culture
- Enterovirus: culture
- Food microbiology
- Fungus: culture, identification
- Gonorrhea: culture, DNA detection
- Hantavirus: IgM and IgG
- Hepatitis A: IgM, total antibody
- Hepatitis B: Core Ab total, Core IgM, Surface Ab, Surface Antigen
- Hepatitis C: Antibody
- Herpes Simplex: culture, antibody
- HIV: serum & oral fluid antibody, Western blot
- Influenza A & B: culture, strain typing, direct FA
- Lead, blood
- Legionella: culture
- Lyme: IgM, IgG, Western Blot
- Measles (Rubeola): IgG, IgM
- Meningococcus: culture, serotyping
- Microsporidia
- Mumps: antibody, culture
- Mycobacteria: culture, drug susceptibility, DNA detection
- Norovirus: PCR
- Orthopox: PCR
- Ova & Parasite: formalin concentrate, PVA trichrome
- Parainfluenza 1,2,3: culture, direct antigen
- Q Fever: antibody
- Rabies: animal direct detection FA, human antibody titer
- Respiratory syncytial virus: direct antigen
- Respiratory virus: culture
- Ricin: toxin detection, antigen
- Rocky Mountain Spotted Fever: IgG
- Rubella: IgG, IgM
- Salmonella: culture, serotype
- SARS Coronavirus: PCR, serology
- Shigella: culture, serotype
- Special Pathogen Culture
- St. Louis encephalitis: IgG, IgM
- Syphilis: RPR, TPA (confirmatory)
- Tularemia: antibody, culture, PCR
- Typhus: antibody
- Vaccinia virus: PCR
- Varicella Zoster: direct Antigen detection IgG, virus culture, PCR
- Vibrio: culture
- Virus Culture, Miscellaneous
- West Nile Virus: human IgM & IgG, bird/mosquito PCR
- Worm (*Helminth*): identification
- Viral hemorrhagic fever: referral services
- Yeast: culture, identification
- Yersinia: culture, PCR

- PCR: Anthrax, Norovirus, Bordetella, Tularemia, Yersinia, Brucella, West Nile, Orthopox, SARS, Varicella Zoster.
- PFGE: Pulse Field Gel Electrophoresis
- Special Pathogen Confirmation: Yersinia, Bacillus, Brucella, Tularemia

Laboratory Contacts

Director: Michael Smith mike.smith@state.sd.us

Medical Section Supervisor: Yvette Thomas yvette.thomas@state.sd.us (also courier contact for clinical specimens)

Environmental/Forensic Supervisor: Stacy Ellwanger stacy.ellwanger@state.sd.us

Phone: 605-773-3368

Phone for Shipping/Kit Supplies: 605-773-3183

Web page: www.state.sd.us/doh/Lab

CLIA number: 43D0658941

Medical Section is CLIA approved for subspecialties: bacteriology, mycobacteriology, mycology, parasitology, virology, diagnostic immunology and toxicology.

South Dakota Department of Health - Infectious Disease Surveillance

Selected Morbidity Report, 1 January – 28 February 2005 (provisional)

Disease		2005 year-to-date	5-year median	Percent change
Vaccine-Preventable Diseases	Diphtheria	0	0	na
	Tetanus	0	0	na
	Pertussis	20	1	+1900%
	Poliomyelitis	0	0	na
	Measles	0	0	na
	Mumps	0	0	na
	Rubella	0	0	na
	Haemophilus influenza type b	0	0	na
Sexually Transmitted Infections and Blood-borne Diseases	HIV infection	13	3	+333%
	Hepatitis B	0	0	na
	377	377	323	+17%
	Gonorrhea	40	35	+14%
	Genital Herpes	54	57	-5%
	Syphilis, primary & secondary	0	0	na
Tuberculosis	Tuberculosis	3	3	+0%
Invasive Bacterial Diseases	*Neisseria meningitides*	0	1	-100%
	Invasive Group A *Streptococcus*	4	4	+0%
	Invasive Group B *Streptococcus*	4	2	+100%
Enteric Diseases	*E. coli* O157:H7	2	1	+100%
	Campylobacteriosis	8	14	-43%
	Salmonellosis	20	11	+82%
	Shigellosis	6	3	+100%
	Giardiasis	9	7	+29%
	Cryptosporidiosis	2	2	+0%
	Hepatitis A	0	1	-100%
Vector-borne Diseases	Animal Rabies	5	12	-58%
	Tularemia	0	0	0%
	Rocky Mountain Spotted Fever	0	0	0%
	Malaria (imported)	0	0	na
	Hantavirus Pulmonary Syndrome	1	0	na
	Lyme disease	0	0	na
	West Nile Virus disease	0	0	na
Other Diseases	*Streptococcus pneumoniae*, drug-resistant	1	0	na
	Legionellosis	0	0	na
	Additionally, the following diseases were reported: Bacterial Meningitis, non-meningococcal (5), chicken pox (19); MRSA, invasive (6); HUS (1).			

Communicable diseases are obligatorily reportable by physicians, hospitals, laboratories, and institutions.
The **Reportable Diseases List** is found at www.state.sd.us/doh/Disease/report.htm or upon request.
Diseases are reportable by telephone, mail, fax, website or courier.
Telephones: 24 hour answering device 1-800-592-1804; for a live person at any time call 1-800-592-1861; after hours emergency 605-280-4810. **Fax** 605-773-5509.
Mail in a sealed envelope addressed to the DOH, Office of Disease Prevention, 615 E. 4th Street, Pierre, SD 57501, marked "Confidential Medical Report". **Secure website:** www.state.sd.us/doh/diseasereport.htm.

2,500 copies of this Bulletin were printed by the Department of Health at a cost of $0.28 per copy.